

List of Claims:

Claim 1 (currently amended): An apparatus for interfacing customer premise equipment with a telephone network, the apparatus comprising:

an interface within the customer premise equipment that is coupled to the telephone network, the interface comprising a current source, wherein the current source provides a constant current, ~~drawn from the telephone network~~, to the customer premise equipment when a line impedance of the telephone network varies in a predetermined range when the customer premise equipment is off-hook; and

a tip conductor and a ring conductor, both the tip conductor and the ring conductors are coupled to the interface.

Claim 2 (original): The apparatus of claim 1, wherein the line impedance of the telephone network is defined by an EWTIA-496-A interface standard.

Claim 3 (original): The apparatus of claim 1, wherein the telephone network is a Plain Old Telephone System (POTS) network.

Claim 4 (original): The apparatus of claim 1, wherein the current source includes a FET.

Claim 5 (original): The apparatus of claim 1, wherein the constant current is approximately 30mA.

Claim 6 (original): The apparatus of claim 1, wherein the telephone network is a PBX system.

Claim 7 (original): The apparatus of claim 1, further comprising an off-hook relay.

Claim 8 (original): The apparatus of claim 1, wherein the current source includes a low pass filter.

Claim 9 (currently amended): An apparatus at a customer premise that is coupled to a telephone network, the apparatus comprising:

a receiver;

an interface coupled to the receiver and the telephone network, wherein the interface comprises a current source, wherein the current source provides a constant current, ~~drawn from the telephone network,~~ to the receiver when a line impedance of the telephone network varies in a predetermining range when the customer premise equipment is off-hook; and

a tip conductor and a ring conductor; both the tip conductor and the ring conductor are coupled to the interface.

Claim 10 (original): The apparatus of claim 9, wherein the current source includes a FET.

Claim 11 (original): The apparatus of claim 9, wherein the telephone network is a Plain Old Telephone Service network.

Claim 12 (original): The apparatus of claim 9, wherein the line impedance of the telephone network is defined by an EWTIA-496-A interface standard.

Claim 13 (original): The apparatus of claim 9, further comprising a coder/decoder.

Claim 14 (original): The apparatus of claim 9, wherein the receiver is a hybrid receiver.

Claim 15 (original): The apparatus of claim 9, wherein the telephone network is a PBX system.

Claim 16 (original): The apparatus of claim 9, wherein the constant current is approximately 30mA.

Claim 17 (currently amended): A method of providing a constant current to an apparatus coupled to a telephone network, the method comprising the steps of:

- connecting the apparatus at the customer premise to a tip conductor and a ring conductor;
- taking the apparatus off-hook; and
- sinking a constant DC bias current, ~~drawn from the telephone network~~, while off-hook,

where the DC bias current is independent of a load on the tip conductor and the ring conductor.

Claim 18 (original): The method of claim 17, wherein the telephone network is a Plain Old Telephone Service (POTS) network.

Claim 19 (original): The method of claim 17, wherein the telephone network is a PBX System.

Claim 20 (original): The method of claim 17, wherein the DC bias current is approximately 30mA.

Claim 21 (currently amended): ~~The apparatus of claim 1, wherein the current source includes~~ An apparatus for interfacing customer premise equipment with a telephone network, the apparatus comprising:

an interface within the customer premise equipment that is coupled to the telephone network, the interface comprising a current source, wherein the current source provides a constant current to the customer premise equipment when a line impedance of the telephone network varies in a predetermined range when the customer premise equipment is off-hook;

a tip conductor and a ring conductor, both the tip conductor and the ring conductors are coupled to the interface;

a driver having a non-inverting input, an inverting input and an output;

a divider for dividing a first voltage and providing a second voltage to the non-inverting input; and

wherein the driver ~~derives~~ drives the output , such that the inverting input is at substantially the second voltage.

Claim 22 (currently amended): ~~The apparatus of claim 9, wherein the current source includes~~ An apparatus at a customer premise that is coupled to a telephone network, the apparatus comprising:

a receiver;

an interface coupled to the receiver and the telephone network, wherein the interface comprises a current source, wherein the current source provides a constant current to the receiver when a line impedance of the telephone network varies in a predetermining range when the customer premise equipment is off-hook;

a tip conductor and a ring conductor; both the tip conductor and the ring conductor are coupled to the interface;

a driver having a non-inverting input, an inverting input and an output;

a divider for dividing a first voltage and providing a second voltage to the non-inverting input; and

wherein the driver ~~derives~~ drives the output , such that the inverting input is at substantially the second voltage.

Claim 23 (new): The apparatus of claim 21, wherein the line impedance of the telephone network is defined by an EWTIA-496-A interface standard.

Claim 24 (new): The apparatus of claim 21, wherein the telephone network is a Plain Old Telephone System (POTS) network.

Claim 25 (new): The apparatus of claim 21, wherein the current source includes a FET.

Claim 26 (new): The apparatus of claim 21, wherein the constant current is approximately 30mA.

Claim 27 (new): The apparatus of claim 21, wherein the telephone network is a PBX system.

Claim 28 (new): The apparatus of claim 21, further comprising an off-hook relay.

Claim 29 (new): The apparatus of claim 21, wherein the current source includes a low pass filter.

Claim 30 (new): The apparatus of claim 21 further comprising a reference diode coupled to the driver via the divider, wherein the reference diode provides the first voltage to the divider.

Claim 31 (new): The apparatus of claim 21, wherein the divider includes a first resistor and a second resistor.

Claim 32 (new): The apparatus of claim 21 further comprising a transistor, wherein the driver drives the transistor.

Claim 33 (new): The apparatus of claim 32 further comprising a resistor connected to the transistor, wherein the second voltage is held across the resistor.

Claim 34 (new): The apparatus of claim 22, wherein the current source includes a FET.

Claim 35 (new): The apparatus of claim 22, wherein the telephone network is a Plain Old Telephone Service network.

Claim 36 (new): The apparatus of claim 22, wherein the line impedance of the telephone network is defined by an EWTIA-496-A interface standard.

Claim 37 (new): The apparatus of claim 22, further comprising a coder/decoder.

Claim 38 (new): The apparatus of claim 22, wherein the receiver is a hybrid receiver.

Claim 39 (new): The apparatus of claim 22, wherein the telephone network is a PBX system.

Claim 40 (new): The apparatus of claim 22, wherein the constant current is approximately 30mA.

Claim 41 (new): The apparatus of claim 22 further comprising a reference diode coupled to the driver via the divider, wherein the reference diode provides the first voltage to the divider.

Claim 42 (new): The apparatus of claim 22, wherein the divider includes a first resistor and a second resistor.

Claim 43 (new): The apparatus of claim 22 further comprising a transistor, wherein the driver drives the transistor.

Claim 44 (new): The apparatus of claim 43 further comprising a resistor connected to the transistor, wherein the second voltage is held across the resistor.

Claim 45 (new): A method of providing a constant current to an apparatus coupled to a telephone network, the method comprising:

connecting the apparatus at the customer premise to a tip conductor and a ring conductor;

taking the apparatus off-hook;

sinking a constant DC bias current while off-hook, where the DC bias current is independent of a load on the tip conductor and the ring conductor;

dividing a first voltage to generate a second voltage;
providing the second voltage to a non-inverting input of a driver; and
driving the output of the driver, such that an inverting input of the driver is at
substantially the second voltage.

Claim 46 (new): The method of claim 45, wherein the telephone network is a Plain Old Telephone Service (POTS) network.

Claim 47 (new): The method of claim 45, wherein the telephone network is a PBX System.

Claim 48 (new): The method of claim 45, wherein the DC bias current is approximately 30mA.

Claim 49 (new): The apparatus of claim 1, wherein the constant current is drawn from the telephone network.

Claim 50 (new): The apparatus of claim 9, wherein the constant current is drawn from the telephone network.

Claim 51 (new): The method of claim 17 further comprising: drawing the constant current is drawn from the telephone network.

Claim 52 (new): The apparatus of claim 21, wherein the constant current is drawn from the telephone network.

Claim 53 (new): The apparatus of claim 22, wherein the constant current is drawn from the telephone network.

Claim 54 (new): The method of claim 45 further comprising: drawing the constant current is drawn from the telephone network.